USEPA WORK ASSIGNMENT NO. 081-2JZZ
USEPA CONTRACT NO. 68-W8-0110
EBASCO SERVICES INCORPORATED

ARCS II PROGRAM

DRAFT
SITE SCREENING REPORT
OLD VILLAGE OF ENDICOTT DUMP
VILLAGE OF ENDICOTT
BROOME COUNTY, NEW YORK
CERCLIS NO. NYD980508238

MARCH 1995

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EBASCO

March 24, 1995
ARCS II-95-081-010

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New York, NY 10007

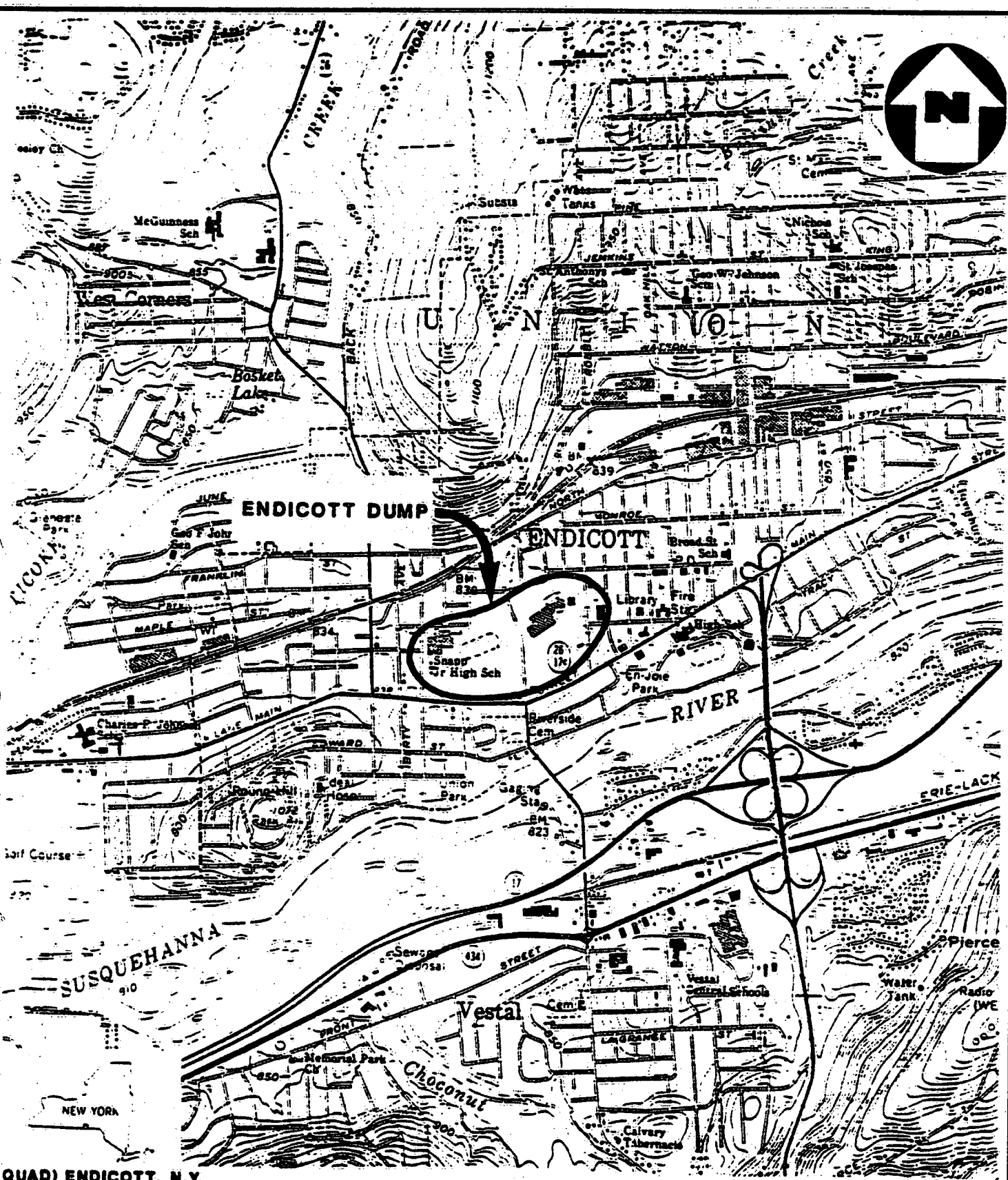
SUBJECT: ARCS II PROGRAM - EPA CONTRACT No.68-W8-0110
WORK ASSIGNMENT No. 081-2JZZ - SITE ASSESSMENTS (ESI/RI)
OLD VILLAGE OF ENDICOTT TOWN DUMP SITE SCREENING REPORT

Dear Ms. Moyik:

This letter report presents the results of Ebasco's site screening for the Old Village of Endicott Town Dump site. As required by the Draft Work Plan, the report consists of five parts. The *General Description and Site Summary* provides a discussion of the site location and disposal history. The *Evaluation of Existing Information* presents an evaluation of the site in accordance with the Hazard Ranking System (HRS). This discussion is supported by the HRS Scoresheets, which are provided as Attachment 1. The *Sensitivity Analysis* provides an examination of the impact of missing/incomplete data on the overall site and individual pathway scores. The *Recommendations for Additional Investigation* present the actions necessary to complete the data collection efforts identified in the Sensitivity Analysis. The Task Work Plan for implementing the recommendation is provided as Attachment 2. The recommendations are followed by the *Summary and Conclusions* section. The *Revised Cost Estimate*, consisting of the Optional Form 60 and the Basis of Estimate, will be provided under a separate cover.

I. General Description and Site History

The Old Village of Endicott Dump site (CERCLIS NO. NYD980508238) is an inactive landfill/dump located in the Village of Endicott, Broome County, New York. The site is bordered by Hanna Street, Central Street and Andrews Avenue to the north, Harrison and Filmore Avenue to the east, East Main Street to the south, and Loder Avenue to the west. Vestal Avenue, a north-south oriented road, bisects the site into eastern and western parcels. A Site Location Map is provided as Figure 1, and a Site Map is presented as Figure 2. The entire landfill/dump has been estimated at approximately 28 to 30 acres in area although the exact landfill perimeter has not been defined. The terms landfill and dump have been used interchangeably to reference the site in the background files. Consistent with older non-engineered landfills, a broad area was filled with waste. In contrast, present definitions of landfills and dumps would suggest the site was a dump due to the lack of any landfill engineering. To maintain consistency with the site CERCLIS identification, the landfill/dump will hereinafter be



(QUAD) ENDICOTT, N.Y.

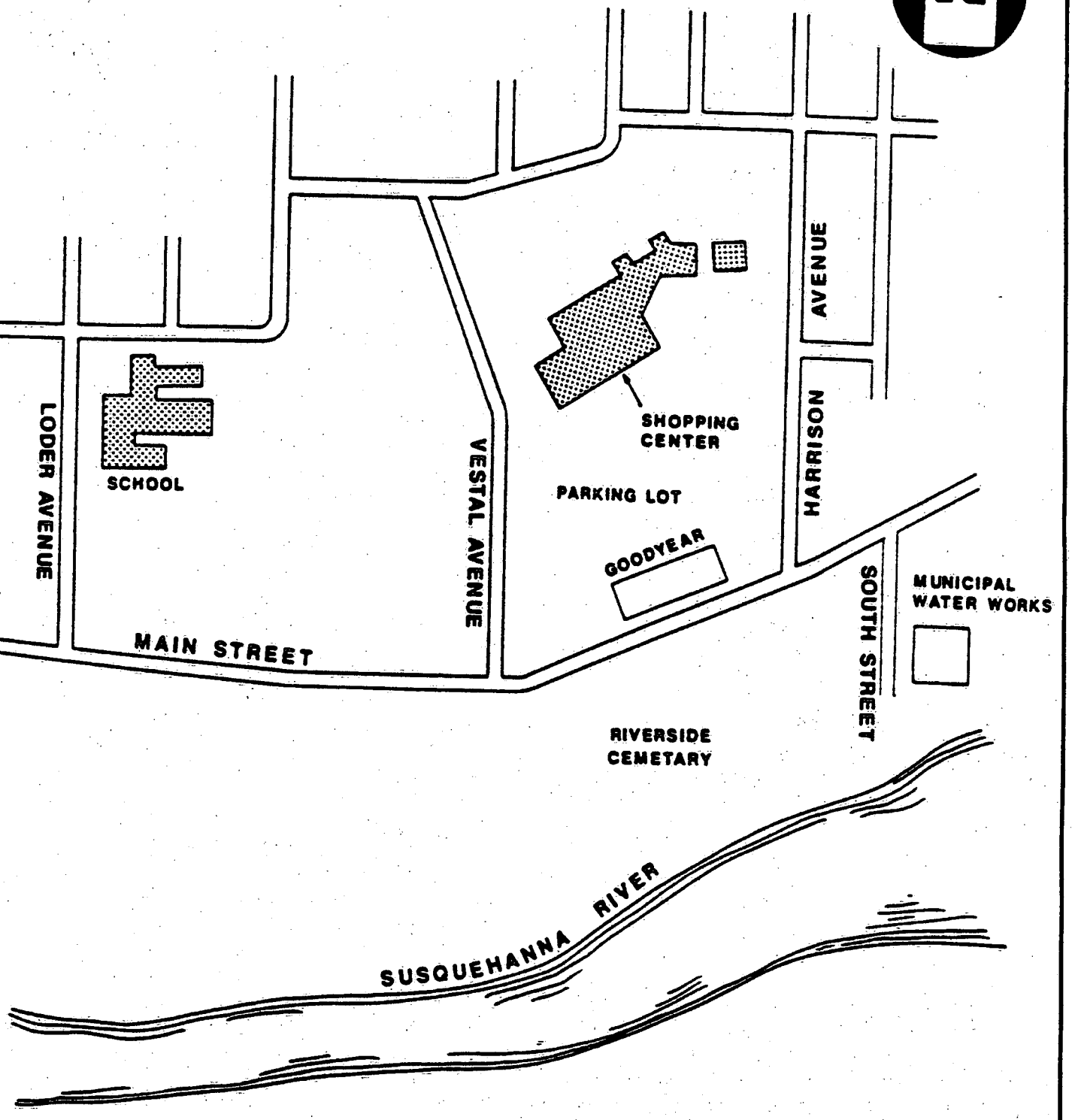
SITE LOCATION MAP

ENDICOTT DUMP, ENDICOTT, N.Y.

SCALE: 1"=2000'

Ebasco Services Incorporated

Figure 1
Site Location Map



SITE MAP

ENDICOTT DUMP, ENDICOTT, N.Y.

(NOT TO SCALE)

Ebasco Services Incorporated

Figure 2
Site Map

referred to as the dump. Finally, although the background files often refer to the dump as being located in "Endicott", "Village of Endicott" and even "Union" and "Johnson" which are neighboring municipalities, the municipal clerk advised that the correct municipal name is "Village of Endicott."

The Village of Endicott is located in the Susquehanna River Valley in south central New York. During the most recent Pleistocene glaciation, the area was covered by an ice sheet more than a mile thick. The force of the glacier removed most of the soil from the region, depositing it to the south in the terminal moraines that form Long Island and Staten Island. During deglaciation, outwash from melting ice filled the lower portion of the river valley with extensive deposits of sand and gravel. As a result, the area is characterized by highly transmissive, high yielding aquifers that are interconnected with the Susquehanna River. The higher hill slopes are generally covered with a thin soil consisting of largely impermeable glacial till. Sand and gravel filled valleys cover 15 percent of the Susquehanna River Valley watershed area whereas till covered uplands cover the remaining 85 percent of the watershed.

The dump site appears to have been situated in a glacial kettle hole. A kettle hole is formed during deglaciation when an ice block breaks off of a retreating glacier. The ice block temporarily prevents outwash sand and gravel discharging from the glacier from being deposited at its location. Subsequently upon melting, the former ice block forms a hole in the outwash which often takes the shape of a kettle pot, hence the glacial morphology terms, kettle hole and kettle pond, which respectively refer to the depression being empty or filled with water.

The dump was owned and operated by the Endicott Johnson Corporation from the mid 1960s to the early 1970s. The Endicott Johnson Corporation primarily processes leather for the manufacture of shoes as noted by the corporation's administration department. The company has been located in Endicott since at least 1918, at which time it was noted on the Sanborn Fire Insurance Map as "Endicott-Johnson & Co. Shoe M'f'r's" (Figure 3). The dump was used for disposal of process waste generated from leather tanning and dyeing operations. Wastes potentially associated with the tanning of leather for the manufacture of shoes include naphthalene related compounds, formaldehyde, hydrocarbons, sulfuric acid, and chromium. Other wastes, including rubber scrap, the soles of shoes, cinders, and debris from the powerhouse, were also sent to the dump. In addition, the site was reportedly used by both municipal and private parties, including the Village of Endicott and Vestal municipalities, and the IBM Corporation. The magnesium metal waste IBM disposed of in the dump was reportedly burned on-site.

The site has been further developed since the dump closure. The Snapp Junior High School playing fields lie to the west of Vestal Avenue and the Endicott Shopping Center lies to the east of Vestal Avenue. Similar to the Endicott Johnson Corporation, at least a portion of the school building existed on the site since 1918. The school is noted as the Union Public School No. 3 at that time on the Sanborn Fire Insurance Map (Figure 4).

An EPA Region II Field Investigation Team (FIT) conducted a Site Inspection (SI) on June 6, 1987 at the dump site. As part of this investigation, a total of two groundwater and three soil samples, taken at depths ranging from 1.5-2.5 feet, were collected. All samples were analyzed for

SCALE 100 FT. TO AN INCH

ENDICOTT-JOHNSON & CO SHOE MFR'S. LUMBER DEPT.

THE UNION FORGING CO.

BORDEN'S FARM PRODUCTS CO. INC.

LIGHT-UNKEFER LUMBER YD

RAILROAD

ROBBLE AV. (JOHNSON)

EVERGREEN AV.

PARSONS AV.

FILLMORE AV.

HARRISON AV.

ANDREWS AV.

MECHANIC

CENTRAL AV.

FLORENCE

MONROE

BROAD

NORTH

Union

Endicott

25

25B

9

10A

2

218

219

220

221

222

126

245

246

Scale 100 ft to One Inch.

Environmental Risk Information & Imaging Services
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SANBORN MAPS™ by ERIS

Figure 3
1918 Sanborn Map with
Location of Endicott Johnson

1918

19

OAK ST.

HANNAH (ENDICOTT)

21

JUNE 1918
ENDICOTT
N.Y.
UNION

242

UNION (SCHOOL)

UNION PUBLIC SCHOOL NO 3

LODER

244

243

E. MAIN

24

Figure 4
1918 Sanborn Map with
Location of School

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SANBORN MAPS™ by ERIS

1918

Target Analyte List (TAL) and Target Compound List (TCL) constituents through the EPA Contract Laboratory Program (CLP), in accordance with EPA Quality Assurance/Quality Control (QA/QC) protocols. Analytical results from the soil samples indicated the presence of organic and inorganic contaminants (provided as Table 1), including wastes associated with the leather tanning process. The analytical results from the groundwater samples detected low levels of dichloroethylene and manganese.

Two monitoring wells were also installed by the New York State Department of Environmental Conservation (NYSDEC) as part of an underground storage tank (UST) removal at a service station located between the Endicott site and the South Street Wells. Analytical results of the groundwater samples collected from these wells in September 1988 indicated the presence of naphthalene (2,500 ug/l). Naphthalene is used in tanning operations and is not a common constituent associated with gasoline or motor oils, which were stored in the USTs. The data quality associated with these samples is unknown.

II. Evaluation of Existing Information

The existing information and analytical data were used to perform a hazard assessment for the site. The Draft Site Inspection Report (NUS, 1988) and Site Hazard Ranking System Screening Letter (Malcolm Pirnie, 1994) provided the supporting information. These evaluations indicated the potential for groundwater and soil contamination. Additional nonsampling information was obtained to substantiate the presence of hazardous wastes on site and confirm potential targets. The hazard assessment was performed in accordance with the requirements of the Hazard Ranking System Final Rule using the PRESCORE program.

The preliminary site score is 65.63. The site consists of a single source unit, which is the old dump area. The estimated area of the dump is 1,300,000 square feet. As stated above, the analytical results from the soil samples taken during the 1987 NUS site investigation indicate the presence of 32 Hazardous Substance List (HSL) compounds in surface soils (<2' in depth). There have been no remedial, cleanup, or enforcement actions undertaken at this site. The soil exposure (100.00) and groundwater pathways (83.54) are the principal pathways of concern. The pathway-specific evaluations are discussed below.

A. Groundwater Pathway

The groundwater pathway score is 83.54, evaluated on a potential to release basis. Although samples collected from Well No. 5 (Sample ID NY81-GW1) contained trans-1,2-dichloroethylene (3ug/l) and manganese (578 ug/l) at levels exceeding three times the upgradient sample (Sample ID NY81- GW2), there is no documented evidence that these contaminants were disposed of at the site. Naphthalene, commonly used in leather tanning operations, was detected at 2,500 ug/l in sampling associated with UST removal, however the quality of this data is unknown and therefore it was not used in the groundwater pathway evaluation.

Table 1
Summary of Analytical Soil Data

COMPOUND	NY81-S1	NY81-S2	NY81-S3
Acenapthene	320J		200J
Acenaphthylene	2500		410J
Acetone	66B	51B	94B
Aluminum	10700	9150	6770
Anthracene	1400		340J
Arsenic	25	8.3	12
Benzo(a)anthracene	3900		2000
Bezno(a)pyrene	2700		1400
Benz(g,h,i)perylene	1900		1300
Benzo(j,k)fluorene	5900		3700
Benzofluoranthene	4500		2300
Beryllium	[2.3]	[1.5]	3.3
Carbon Disulfide	45		
Chromium	50	12	443
Chrysene	3200		1700
Copper	171	26	219
Dibenz(a,h)anthracene	1100		540
Dibenzofuran	620		140J
Fluorene	920		300J
Indeno(1,2,3-cd)pyrene	1900		1000
Iron	26100	16700	40100
Lead	75E	11	298E
Magnesium	[2870]	8490	[1830]
Manganese	511	613	373
2-Methyl Naphthalene	810		130J
Naphthalene	1500		280J
Nickel	[46]	20	26
PCBs			798
Phenanthrene	6000		3000
Pyrene	3700		2700
Zinc	135	96	704

J - Estimated value.
B - Compound also present in laboratory blank.
E - Value estimated due to laboratory interference.
[] - Compound present below detection limits. Estimated value.

The hydrogeologic framework controlling the groundwater pathway is well-defined in the Village of Endicott area. In the higher elevations, groundwater is found mostly in bedrock fractures and faults. These deposits are capable of supporting private wells, but are not tapped for municipal systems. In contrast, the valleys contained numerous, high yielding water supply wells drawing from the sand and gravel outwash outwash deposits. The sand and gravel in which these wells are located are interconnected with the Susquehanna River. Depending upon the proximity of each well to the river, a large percentage of the water withdrawn for use is surface water derived from induced infiltration through the riverbed material. Wells yielding in excess of one million gallons per day (mgd), or 694 gallons per minute (gpm), are common. The larger wells reported on in the literature commonly have yields up to 2,500 gpm (3.6 mgd). Even higher yields are presently being recorded in the site area.

Approximately 58,896 people reside within 4 miles of the site, of which 5,221 are estimated to obtain their drinking water from privately owned wells. The remainder of the population within the vicinity of the site are supplied by the Village of Endicott municipal system. Well No.5 and Well No. 28, located approximately 1,000 feet directly downgradient of the site, service approximately 5,147 persons each (10,294 total). Apportionment between groundwater and surface water sources is presented in Figure 5.

B. Surface Water Pathway

The surface water pathway score is 0.39, evaluated on a potential-to-release basis. There is no documentation available to support a release of contaminants to the surface water pathway from the site, although the presence of trans-1,2-dichloroethane (3ug/l) and manganese (578 ug/l) may be due to the influence of infiltration of surface water from the Susquehanna River.

The surface water pathway is dominated by the Susquehanna River which, lies approximately 1,000 feet to the south. The site is connected to the Susquehanna River by storm water drains. In addition, the dump and surrounding area lies on the floodplain between the 100-and 500-year flood heights.

A total of 47,554 persons receive their drinking water from sources tapping the Susquehanna River. As stated above, the USGS reports that a large percentage of the water drawn by the wells in the sand and gravel deposits that supply the municipal water systems is river water. Therefore, portions of the withdrawals from Well No. 5 and Well No. 28 are attributable to surface water sources. A total population of 10,294 (5,147 from each well) is allocated to these wells. In addition, withdrawals from the Endicott Well No. 32, Vestal Well No. 1-3, and Vestal No. 5-1 service 26,764, 5,248, and 5,248 persons, respectively. These wells are in different hydrogeologic regimes than the site and are more heavily influenced by the Susquehanna River than Well No. 5 and Well No. 28. The methodology for allocation of water sources is provided in Figure 5.

The NYSDEC Wildlife Resources Center (DEC WRC) conducted a review of the New York Natural Heritage Program files for sensitive environments surrounding the dump site latitude and longitude. The DEC WRC reported the existence of four vascular plants with NYS Environmental Conservation Law status including: one T (threatened); two R (rare); and one U

FIGURE 5 - ALLOCATION OF WATER USE

GROUNDWATER ALLOCATION:

	Private Wells (1)	Endicott #5 (2)	Endicott #28 (2)	Total
0-1/4 mile	0	5,147	5,147	10,294
1/4-1/2 mile	1	0	0	1
1/2-1 mile	58	0	0	58
1-2 miles	653	0	0	653
2-3 miles	1,518	0	0	1,518
3-4 miles	2,961	0	0	2,961
Total	5,191	5,147	5,147	15,485

(1) Private well data is from CENTRACTS report, using 1990 Census data.

(2) The Endicott municipal system serves approximately 45,000 people. Wells 5 and 28 each provide approximately 19.61% (10,294 people) of the supply, based upon pumping information supplied by the Endicott Water Department. Half of the water withdrawn from these wells is assumed to be the result of induced infiltration from the Susquehanna River. Therefore, the population allocated to groundwater is (10,294)(.5)(.5), or 5,147 people.

SURFACE WATER ALLOCATION:

Withdrawal	Distance Downstream	Population
Endicott Well #5 (1)	0.1	5,147
Endicott Well #28(1)	0.1	5,147
Vestal Well #1-3 (2)	0.5	5,248
Endicott Well #32 (3)	1.5	26,764
Vestal Well #5-1(4)	1.75	5,248
Total		47,554

(1) As discussed above, these allocated populations represent 50% of the total withdrawals from Wells #5 and #28.

(2) Vestal Well #1-3 is located .5 miles from the site, on the south bank of the Susquehanna River. The well services an estimated 5,247 people, based upon pumping rates supplied by the town of Vestal. The well is heavily influenced by induced infiltration from the river, and any impact from site releases would be through the surface water pathway. Therefore, all water use is conservatively assigned to the surface water pathway.

(3) Endicott Well #32 is approximately 1.5 miles downstream from the site, in a different groundwater regime. Due to its construction (Ranney Well), it is more heavily influenced by induced infiltration from the Susquehanna than Wells #5 and #28. Therefore, any impact from site related compounds would be from the surface water pathway and all water use is assumed to be from surface water. According to pumping rates supplied by the town of Endicott, the well services an equivalent population of 26, 764 people.

(4) Vestal Well #5-1 is located 1.75 miles from the site, on the south bank of the Susquehanna River. The well services an estimated 5,247 people, based upon pumping rates supplied by the town of Vestal. The well is heavily influenced by induced infiltration from the river, and any impact from site releases would be through the surface water pathway. Therefore, all water use is conservatively assigned to the surface water pathway.

(unprotected). All four plants are reported with latitude and longitude positions west of the site. The locations are approximately along the Susquehanna and downstream of the dump site in the next USGS 7.5 minute quadrangle, Apalachin, NY. The approximate distance downstream is estimated at 5 miles. The direct line distances is estimated at approximately 4.5 miles.

A wetlands inventory has not been completed. However, wetlands are observed along the surface water pathway and an estimated 5.1 miles of wetlands frontage are reported in the background files. Wetlands classification types are yet to be determined. The Susquehanna River is registered by New York State as a freshwater fishery with a classification for the maintenance and propagation of aquatic life. It is documented to support recreational fishing.

C. Soil Exposure Pathway

The soil exposure pathway score is 100.00, evaluated on the basis of an area of observed contamination. There are approximately 740 students and faculty at the Snapp Junior High School, which is located within the area of observed contamination. In addition, 1,188 people live within a 0-1/4 mile radius of the site, 3,084 within a 1/4-1/2 mile radius, and 8,608 within a 1/2-1 mile radius. There are no day care centers or terrestrial sensitive environments within 200 feet of the site.

Although no off-site background sample was collected during the 1987 NUS field investigation, the HRS Final Rule does allow for samples containing some contamination to be used as background. A review of the soil analytical data indicates that a background designation can be assigned to sample NY81-S2. Although NY81-S2 was collected from the top of the previous dump area, only four organic contaminants were detected. All four are also present in the blank data.

Samples NY81-S1 and NY81-3 were compared to NY81-2 for significance above background. Analytical data on NY81-S1 and NY81-S3 detected a number of organic and inorganic contaminants attributable to past site activities at levels exceeding three times background. These results are presented in Table 1. In addition, waste was noted in soil sample auger hole NY81-S3.

Wastes disposed of in the dump have been covered by a variety of materials since its closure. Although the exact dates have not been determined at present, activities associated with Vestal Street, Endicott Plaza and Snapp Junior High School have all modified the dump area and surface. Many of these changes are documented and illustrated by the revisions between the 1956 and 1969 versions of the USGS topographic maps.

The 1956 USGS topographic map shows Vestal Street entering the site from near the north central portion of the dump. The road extended roughly 250 feet into the site on before splitting and ending. This depiction on the topographic map is consistent with the information available in the background files which indicate that the Endicott Johnson Corporation was located just north of the site. Prior to 1969, Vestal Street was extended approximately 1,000 feet across the site to join East Main Street on the southern border of the dump. In addition, one small kettle hole shown on the 1956 topographic map directly east of the Vestal Street entrance onto the site is

filled in on the 1969 map version. Presently, the roadway appears to be approximately two to four feet higher than the surrounding ground surface as viewed during a site visit in January 1995.

Correspondingly, the Endicott Plaza shopping center first appears on the 1969 version of the USGS topographic map. It is inferred that the Endicott Plaza was constructed on the eastern portion of the dump area following dump closure. The shopping center appears to consist of one large building surrounded by an asphalt parking lot. The building is located on the northernmost portion of the eastern dump half. As shown on the USGS topographic maps, the building was constructed over the northeasternmost kettle hole located on the site. The main parking area extends to the south from the plaza building but also extends around the building for use by service and delivery trucks to the stores. The parking lot extends nearly to East Main Street. Separating the parking lot from East Main Street are a small number of commercial establishments facing East Main Street.

The shopping center parking lot is in extremely poor condition. Extensive settlement has occurred throughout the parking lot. Numerous potholes are present and, following rain events, areas of standing water are present over much of the central portion of the parking lot. Standing water was present during the site visit. The asphalt lot cover is in poor condition reflecting the difficulty in constructing over the dump. Extensive cracks, holes, and a general settlement across the complete parking lot area are readily apparent.

Finally, the Snapp Junior High School had an extension built on the eastern side of the school which reportedly extends over a portion of the site used for dumping. The extension is reported as built on piles. A crawl space exists below the building floor. The surface of crawl space is dirt with the presence of minor debris such as leather scraps, cans, and bottles. The school grounds reportedly were covered with a soil-cement mixture and topped with several inches of clay.

D. Air Pathway

The air pathway score is 15.74, evaluated on a potential-to-release basis. Although OVA readings obtained during the NUS sampling event at soil sampling locations NY81-S1 and NY81-S2 indicated biogas release, no ambient air OVA readings were registered to establish background conditions. The HNu readings at these locations were negative, indicating that the OVA may have been registering methane gas. The updated population information indicates that the target population is 740 on site at the school, 1,188 in the 0-1/4 mile radius, 3,184 in the 1/4-1/2 mile radius, 8,608 in the 1/2-1 mile radius, 20,347 in the 1-2 mile radius, 14,788 in the 2-3 mile radius, and 10,781 in the 3-4 mile radius. No sensitive environments have been located within 1/2 mile of the site.

III. Sensitivity Analysis

A sensitivity analysis was performed to evaluate the strength of the site score and test potential sampling scenarios for additional field investigation. The conditions explained below were applied to the site evaluation. A summary of the individual and combined effects of these cases on the site and pathway scores is presented in Table 2.

TABLE 2
SUMMARY OF SENSITIVITY ANALYSIS

CASE(S)	GROUNDWATER	SURFACEWATER	SOIL	AIR	SITE SCORE
Current	83.54	0.04	100.00	15.74	65.63
I	83.54	0.39	1.64	15.74	42.51
II	100.00	0.39	100.00	15.74	71.15
III	83.54	100.00	100.00	15.74	82.50
IV	83.54	0.39	100.00	100.00	82.13
I, II	100.00	0.39	1.64	15.74	50.62
I, III	83.54	100.00	1.64	15.74	65.63
I, IV	83.54	0.39	1.64	100.00	65.16
I, II, III	100.00	100.00	1.64	15.74	71.54
I, II, IV	100.00	0.39	1.64	100.00	70.72
I, III, IV	83.54	100.00	1.64	100.00	82.13
I, II, III,	100.00	100.00	1.64	100.00	86.61
II, III	100.00	100.00	100.00	15.74	86.96
II, IV	100.00	0.39	100.00	100.00	86.60
II, III, IV	100.00	10.00	100.00	100.00	100.00
III, IV	83.54	83.54	100.00	100.00	96.15

Case I - PAH constituents not included
Case II - Observed release of Level II contaminants to GW
Case III - Observed release of Level II contaminants to SW
Case IV - Observed release of Level II contaminants to Air

Case I: The presence of PAHs in the Waste Characterization (WC) component of the pathway scores is attributed to the documented disposal of rubber soles and incinerator (power house) residues in the dump. If this attribution is questioned during review of the package, the WC component and site score will decrease. However, the overall site score would still exceed the threshold for CERCLA action on the strength of the groundwater pathway score.

Case II: The groundwater pathway has been evaluated on the basis of a potential release. If the presence of napthalene, a site-attributable contaminant could be documented in either a drinking water or monitoring well, the pathway score would increase to 100.00, further strengthening the overall site score.

Case III: The surface water pathway has been evaluated on the basis of a potential release. If the presence of site-attributable contaminants can be confirmed in sediment samples at the PPE, the pathway score would increase to 100.00, further strengthening the overall site score.

Case IV: The air pathway score has been evaluated on the basis of a potential release. There is qualitative evidence of gaseous releases from the dump. If the release of a site related compound could be detected, the pathway score would increase to 100.00, further strengthening the overall site score.

IV. Recommendations for Additional Investigation

This section presents recommendations for additional field investigation at the Old Village of Endicott site. In accordance with the work plan for the ESI/RI Work Assignment, sampling is designed to accomplish the following Phase I, II, and III objectives:

Phase I

- Confirm releases to the pathways of concern.
- Define waste sources for HRS scoring.
- Determine contaminants attributable to the site.

Phase II

- Determine the nature and extent of contamination.
- Determine physical hydrogeologic parameters.
- Determine hydrologic parameters.
- Evaluate contaminant migration pathways.
- Assess potential targets.

Phase III

- Complete physical and chemical site characterization
- Quantify contamination needing remediation for the FS.
- Complete sampling for quantitative risk assessment.
- Evaluate actual contaminant migration.

The pathway-specific recommendations are discussed below:

A. Groundwater Sampling

Addtional sampling is recommended to document an observed release to the groundwater pathway and further . Although the pathway score is sufficient to cause the overall site score to exceed the 28.5 threshold for CERCLA action, the score is based upon a potential to release condition. The overall HRS package would be stronger if an observed release were established.

Five ground water monitoring wells are proposed for installation and sampling at the Old Village of Endicott Dump. In addition, it is proposed that the previous two sampling locations, NY81-GW1 and NY81-GW2 be re-sampled. The locations of the proposed monitoring wells described below are presented in more detail in the Task Work Plan, provided as Attachment 2:

1) Two monitoring wells will be located on the downgradient side of the former dump site to establish a release sample and evaluate actual contamination migration. One will be located on the south side of the Village of Endicott school property midway between Vestal Street and Loder Avenue. The other well will be located on the south side of the Endicott Plaza slightly closer than midway towards Vestal Street rather than midway between Vestal Street and Harrison Avenue.

2) One well will be located off site on the upgradient side of the former dump area to establish a true background condition. This is towards the north side of the dump area on the topographically upgradient side. The exact location will be determined following a review of available public property and accessibility of potential locations to both a drill rig and sampling crews.

3) One well will be located off site on the downgradient side of the former dump area. This well will be located approximately 500 feet south of the dump, midway between the estimated edge of the former dump and the municipal water supply wells. The well will be positioned to intercept the naphthalene plume detected during the UST removal. The exact location will be determined following a review of available public property and accessibility of potential locations to both a drill rig and sampling crews.

4) The fifth monitoring well will be a deep well, positioned adjacent to the monitoring well located on the school property. This well will provide additional

information on the depth of contamination, site hydrogeology, and the potential release of contaminants to deeper aquifers.

B. Surface Water Sampling

Additional sampling to confirm a release to the surface water pathway is not recommended. The existing information and the information that will be collected during the proposed groundwater and soil sampling activities recommended will provide a strong case for NPL listing. In addition, it is unlikely that site related contaminants will be present in river water or sediments at detectable levels due to the large dilution effect of the Susquehanna River.

C. Soil Sampling

Additional sampling is recommended to make a stronger case for attribution of the PAH waste constituents and further define the nature and extent of soil contamination. The collection of 21 soil samples is proposed. Three soil samples will be targeted for collection as subsurface soil samples from those monitoring well borings located on the former dump site. The other 18 soil samples will be collected as surface soil samples. The locations of the proposed sampling locations described below are presented in more detail in the Task Work Plan, provided as Attachment 2:

1) Ten samples will be collected from the school property. The samples will be spread out to provide the broadest possible coverage. However, each sample location will be biased towards any indication of contamination observed at the sampling location. As an example, during the site visit conducted by Ebasco on January 17, 1995 a physical education teacher and custodian working on ground maintenance were questioned. Both individuals reported that debris was coming up on the playing fields, while the grounds maintenance man reported that much of the material worked up was disposed of in a pile located towards the east side of the school property. The ground below the debris pile will be sampled to show those COCs that may be leaching off the debris and those COCs that may be broadly present on the playing fields.

2) Six samples will be collected from the Endicott Plaza shopping area. Two samples will be collected from parking lot areas identified as particularly broken up were the underlying soil may be exposed. Two samples will be collected just past the southern edge of the parking lot area where the ground surface is unpaved. These samples would be near the existing shallow soil sample, NY81-S3, which was collected near the McDonald's fast food restaurant and where debris was noted in the hand augered hole at a depth of less than 2.5 feet. The final two samples will be collected from the northern side of the shopping plaza behind the main plaza building. The pavement in this area is in very poor condition and borders additional residential homes.

3) Two samples will be collected as background samples. The locations of these samples will be determined following the review of additional records in the area. Establishing background soil conditions, particularly for inorganic COCs, is a recognizably difficult task. For this reason the location of these two samples will be deferred until additional area data is reviewed.

D. Air Sampling

Additional sampling to confirm a release to the air pathway is not recommended. The existing information and the information that will be collected during the proposed groundwater and soil sampling activities recommended will provide a strong case for NPL listing. The most likely compound to be found during an air sampling episode is methane, which is not included in the PRESCORE database and will not increase the site score. Air sampling could be conducted at a later stage of the RI process if it is deemed necessary to fully characterize the risk posed by the site.

V. Summary and Conclusions

The HRS score for the Old Village of Endicott site is 65.63. The pathways driving the score are soil exposure and groundwater. The soil exposure pathway has been evaluated based upon an area of observed contamination that affects a resident population of 740 school children and staff at the Snapp Junior High School. The groundwater pathway has been evaluated on a potential release basis affecting approximately 15,515 persons who obtain their drinking water from groundwater sources.

Although the information provided in the background files is sufficient to document the site score, additional sampling is recommended to strengthen the HRS package (Phase I sampling), further define the nature and extent of contamination (Phase II), and assess the actual migration of site related contaminants (Phase III). The sampling consists of the installation of five monitoring wells and twenty-one soil borings. Sampling of the surface water and air pathways is not recommended.

In accordance with the decision tree provided in the Expanded Site Inspection/Remedial Investigation Work Plan (Figure 8), Ebasco recommends that the field investigation described in Section IV and Attachment 2 of this report be implemented as soon as possible. The results will be used to complete an HRS/NPL package and prepare an Accelerated Remedial Investigation (ARI). As per the statement of work provided in the Work Plan, the ARI will contain a preliminary site characterization, streamlined risk assessment, and recommendations for additional investigation.

Submitted by:

Paul Scian
Task Lead
Ebasco Services Incorporated

Approved by:

Dev R. Sachdev

Dev R. Sachdev, Ph.D., P.E.
ARCS II Program Manager
Ebasco Services Incorporated

Reviewed by:

Howard S. Lazarus, P.E.
Site Manager
Ebasco Services Incorporated

Attachments

1 - HRS Scoresheets
2 - Task Work Plan

ATTACHMENT 1
HRS SCORESHEETS

PREscore 3.0 - PRESCORE.TCL File 07/25/94
HRS DOCUMENTATION RECORD
Old Village of Endicott Town Dump - 03/21/95

1. Site Name: Old Village of Endicott Town Dump
   (as entered in CERCLIS)

2. Site CERCLIS Number: NYD980508238

3. Site Reviewer: Paul Scian, Ebasco

4. Date: February 1995

5. Site Location: Village of Endicott, Broome County, New York
   (City/County,State)

6. Congressional District: 27

7. Site Coordinates: Single

Latitude: 42 05'59.0" Longitude: 76 03'34.0"

	Score
Ground Water Migration Pathway Score (Sgw)	83.54
Surface Water Migration Pathway Score (Ssw)	0.39
Soil Exposure Pathway Score (Ss)	100.00
Air Migration Pathway Score (Sa)	15.74

Site Score	65.63

NOTE

EPA uses the terms "facility," "site," and "release" interchangeably. The term "facility" is broadly defined in CERCLA to include any area where hazardous substances have "come to be located" CERCLA Section 109(9)), and the listing process is not intended to define or reflect boundaries of such facilities or releases. Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

PREscore 3.0 - PRESCORE.TCL File 07/25/94
GROUND WATER MIGRATION PATHWAY SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer Aquifer: upper glacial sands		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	400
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	10
Targets		
7. Nearest Well	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.68E+03
8d. Population (lines 8a+8b+8c)	**	1.68E+03
9. Resources	5	5.00E+00
10. Wellhead Protection Area	20	2.00E+01
11. Targets (lines 7+8d+9+10)	**	1.72E+03
12. Targets (including overlaying aquifers)	**	1.72E+03
13. Aquifer Score	100	83.54
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	83.54

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	3
2b. Runoff	25	17
2c. Distance to Surface Water	25	16
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	99
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	99
5. Likelihood of Release	550	99
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	100
8. Waste Characteristics	100	32
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	5.20E+01
10d. Population (lines 10a+10b+10c)	**	5.20E+01
11. Resources	5	5.00E+00
12. Targets (lines 9+10d+11)	**	5.70E+01
13. DRINKING WATER THREAT SCORE	100	2.19

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	99
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+08
16. Hazardous Waste Quantity	*	100
17. Waste Characteristics	1000	320
Targets		
18. Food Chain Individual	50	0.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	3.00E-05
19d. Population (lines 19a+19b+19c)	**	3.00E-05
20. Targets (lines 18+19d)	**	3.00E-05
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	99
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+08
24. Hazardous Waste Quantity	*	100
25. Waste Characteristics	1000	320
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	1.50E-01
26d. Sensitive Environments (lines 26a+26b+26c)	**	1.50E-01
27. Targets (line 26d)	**	1.50E-01
28. ENVIRONMENTAL THREAT SCORE	60	0.06
29. WATERSHED SCORE	100	2.25
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	2.25

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release to Aquifer **Aquifer: upper glacial sands**		
1. Observed Release	550	0
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	400
Waste Characteristics		
4. Toxicity/Mobility/Persistence	*	1.00E+02
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	10
Targets		
7. Nearest Intake	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	5.00E+00
8d. Population (lines 8a+8b+8c)	**	5.00E+00
9. Resources	5	5.00E+00
10. Targets (lines 7+8d+9)	**	1.00E+01
11. DRINKING WATER THREAT SCORE	100	0.48

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
12. Likelihood of Release (same as line 3)	550	400
Waste Characteristics		
13. Toxicity/Mobility/Persistence/Bioacc.	*	5.00E+04
14. Hazardous Waste Quantity	*	100
15. Waste Characteristics	1000	32
Targets		
16. Food Chain Individual	50	0.00E+00
17. Population		
17a. Level I Concentrations	**	0.00E+00
17b. Level II Concentrations	**	0.00E+00
17c. Pot. Human Food Chain Contamination	**	0.00E+00
17d. Population (lines 17a+17b+17c)	**	0.00E+00
18. Targets (lines 16+17d)	**	0.00E+00
19. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

GROUND WATER TO SURFACE WATER MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
20. Likelihood of Release (same as line 3)	550	400
Waste Characteristics		
21. Ecosystem Tox./Mobility/Persist./Bioacc.	*	1.00E+04
22. Hazardous Waste Quantity	*	100
23. Waste Characteristics	1000	32
Targets		
24. Sensitive Environments		
24a. Level I Concentrations	**	0.00E+00
24b. Level II Concentrations	**	0.00E+00
24c. Potential Contamination	**	1.50E-02
24d. Sensitive Environments (lines 24a+24b+24c)	**	1.50E-02
25. Targets (line 24d)	**	1.50E-02
26. ENVIRONMENTAL THREAT SCORE	60	0.00
27. WATERSHED SCORE	100	0.49
28. SW: GW to SW COMPONENT SCORE (Sgs)	100	0.49

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

SOIL EXPOSURE PATHWAY SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	5.00E+01
6. Resident Population		
6a. Level I Concentrations	**	7.40E+03
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	7.40E+03
7. Workers	15	0.00E+00
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	7.45E+03
11. RESIDENT POPULATION THREAT SCORE	**	7.38E+07

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

SOIL EXPOSURE PATHWAY SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	1.00E+02
13. Area of Contamination	100	1.00E+02
14. Likelihood of Exposure	500	5.00E+02
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	0.00E+00
19. Population Within 1 Mile	**	1.40E+01
20. Targets (lines 18+19)	**	1.40E+01
21. NEARBY POPULATION THREAT SCORE	**	1.26E+05
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	100.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

AIR PATHWAY SCORESHEET
Old Village of Endicott Town Dump - 03/21/95

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	440
2b. Particulate Potential to Release	500	66
2c. Potential to Release	500	440
3. Likelihood of Release	550	440
Waste Characteristics		
4. Toxicity/Mobility	*	2.00E+03
5. Hazardous Waste Quantity	*	100
6. Waste Characteristics	100	18
Targets		
7. Nearest Individual	50	2.00E+01
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	1.44E+02
8d. Population (lines 8a+8b+8c)	**	1.44E+02
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	0.00E+00
10c. Sens. Environments(lines 10a+10b)	***	0.00E+00
11. Targets (lines 7+8d+9+10c)	**	1.64E+02
AIR MIGRATION PATHWAY SCORE (Sa)	100	1.57E+01

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

ATTACHMENT 2
TASK WORK PLAN

REVISION: Number 0

WORK PLAN
DISTRIBUTION/CONTROL NOS.

1.0	Original/Project File
2.0	_____
3.0	_____
4.0	_____
5.0	_____
6.0	_____
7.0	_____
8.0	_____
9.0	_____
10.0	_____

TASK WORK PLAN
FOR
SAMPLING VISIT

AT

OLD VILLAGE OF ENDICOTT DUMP
VESTAL STREET
VILLAGE OF ENDICOTT, NEW YORK

CERCLIS NO. NYD980508238

Submitted by: Paul Scian, Task Lead
Submittal Date: March 24, 1995

Reviewed and Approved:

Reviewer: _____
Date: 3/25/95
Reviewer: _____
Date: _____
QA: _____
Date: _____

TASK SUMMARY

Date of Task: To Be Determined
EPA Contact: Cathy Moyik
Phone Number: (212) 637-4339

State Contact: Unknown
Location and Number of Nearest Phone: On site at Snapp JHS

Site Description and Problem

The Old Village of Endicott Dump site is located between Harrison and Loder Avenues in the Village of Endicott, New York (Figure 1). The site is bisected by Vestal Street, occupies approximately 30 acres and is inactive. The site was owned and operated by the Endicott Johnson Corporation (EJC). EJC primarily tans leather and manufactures shoes, and wastes generated in these operations were deposited in the dump up to the early 1970s. Local municipalities and corporations also deposited wastes in the dump. The site has been developed since the end of dumping and is now occupied by a shopping plaza and junior high school. Elevated concentrations of semi-volatiles and metals have been detected in soil samples collected on the school playing fields. Additional low contaminant concentrations are present in a downgradient public water supply well and OVA readings were recorded during soil sampling. Sampling is required to assess background concentrations and document areas of observed contamination and observed releases from the site.

Site Reconnaissance

A site reconnaissance was conducted on January 17, 1995. Potential sampling locations were noted and are presented below in Technical Approach, Sample Strategy.

Sampling Trip Objective

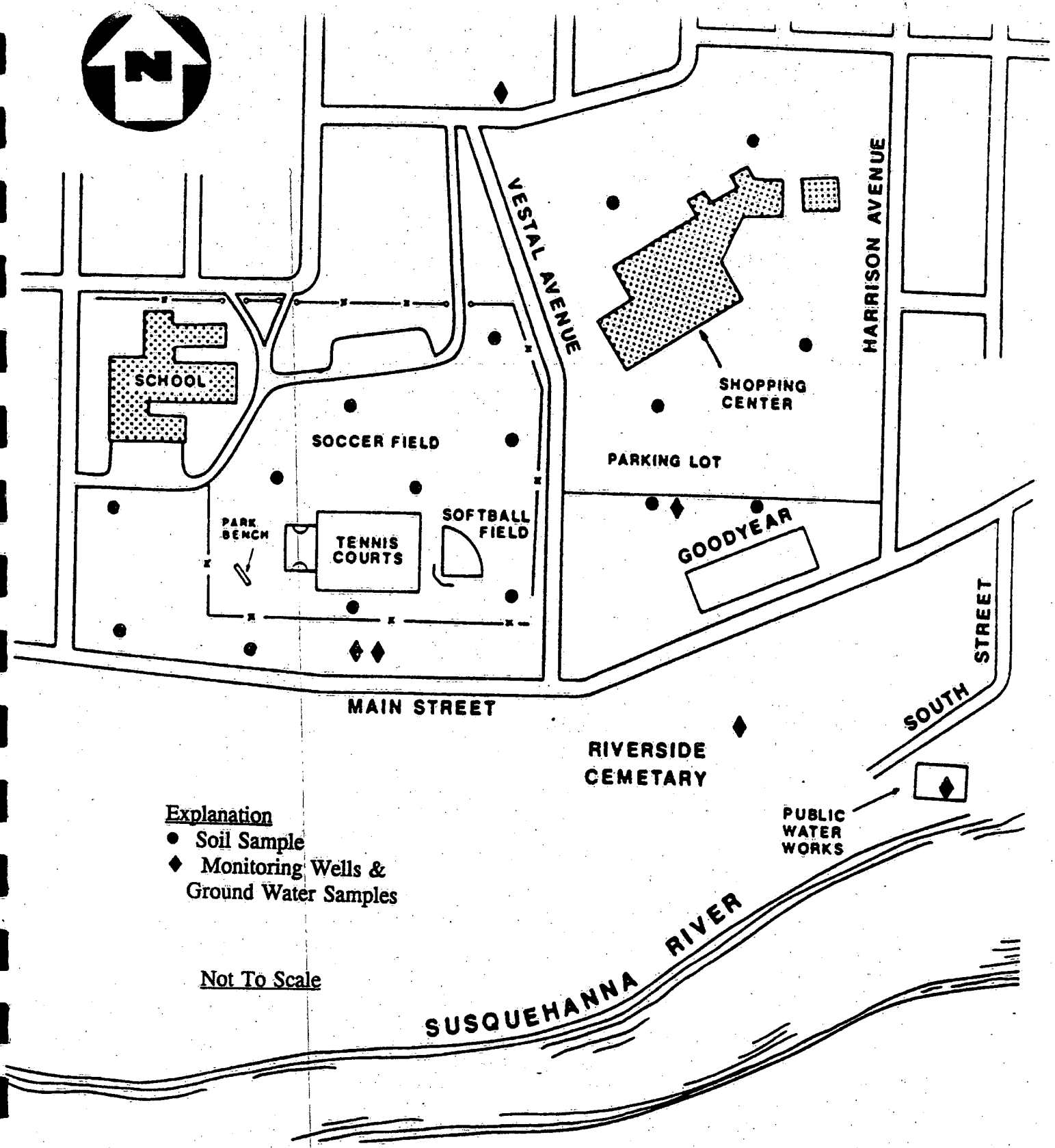
This sampling plan is a preliminary approach to characterize and identify existing soil and groundwater contamination associated with the waste sources on site. Soil sampling locations will be concentrated in those areas that may present releases to site targets and to determine background conditions. Groundwater sampling will be conducted both to confirm release and movement of contaminants from the site and determine background concentrations.

The objectives of this plan are to:

1) Identify through soil analysis the presence or absence of on-site soil contamination present throughout the site and to determine background soil concentrations.

2) Identify through monitoring well installation and groundwater sampling:

    a) the localized geologic and hydrologic settings and,
    b) the presence or absence of groundwater contamination migrating from the site.



Proposed Sample Location Map
Old Village of Endicott Dump
Village of Endicott, New York

Figure 1

TECHNICAL APPROACH

Logistics and Team Approach

NAME	ROLE
Paul Scian	Task Leader
To Be Determined	Health and Safety Officer (HSO)
To Be Determined	Sampler
To Be Determined	Drilling Subcontractor
To Be Determined	Analytical Laboratories

The Task Leader will be responsible for documenting all activities conducted at the site. The HSO will be responsible for monitoring the health and safety of the field personnel and equipment calibration, and will provide assistance to the sampler during sample collection and equipment decontamination.

Activities to be conducted at the site include the following:

1. Monitoring well installation
2. Groundwater sampling
3. Soil sampling

All activities will be conducted in accordance with the approved site Health and Safety Plan (HASP) and applicable portions of appropriate Standard Operating Guidelines (SOGs), with applicable procedures designated on the SOG checklist. Copies of the SOGs as well as the Final Draft Generic Work Plan (2/91)and Field Sampling and Analysis Plan (SAP) (2/91) will accompany the field team.

Sampling Visit

A sampling visit will be conducted and will entail the installation of monitoring wells, and the collection of ground water and soil samples. The sampling activities will include, but will not be limited to, the following:

1 Field team will meet site owners (school officials) and sign in (if applicable).
2 Field team will establish a command post and decontamination area, upwind of source areas, if possible.
3 HSO will preform field calibration check of monitoring instruments.
4 Task leader and HSO will designate appropriate sampling locations. Samplers will decontaminate the sampling equipment.
5 Samplers will collect soil samples and perform borehole logging while Task Leader documents activities in the logbook and assists with the decontamination of sampling equipment between sampling locations.
6 Task Leader will site monitoring well locations
7 Sampler will log monitoring well boring during monitoring well installation.

Samplers will collect ground water samples while Task Leader documents activities in the logbook and assists with the decontamination of sampling equipment between sampling locations.

Sampling Strategy

Soil and groundwater sampling will be performed to confirm the existence of contamination at levels significantly above background conditions and document the area of observed contamintion and an observed release to the groundwater pathway. Potential sample locations are displayed in Figure 1. The data collected will also be used to gain additional information on the nature and extent of contamination and the actual migration of contaminants. The proposed sampling is summarized in Tables 1 and 2 and discussed in the following paragraphs.

Table 1
Summary of Sampling Strategy

Sample Matrix	No. of Samples	Sample Depth	Rationale	Lab Analyses
Surface Soils	18	0'-2'	Establish background conditions and confirm area of contamination.	Full TCL/TAL CLP SOW
Subsurface Soils	3	Screened Well Intervals	Determine potential source conditions.	Full TCL/TAL CLP SOW
Groundwater	6	Screened Well Intervals	Establish background conditions and confirm release	Full TCL/TAL CLP SOW
DI Water	1	NA	One per lot of DI water used	Full TCL/TAL CLP SOW
Trip Blanks	5 (estimated)	NA	1 per cooler containing samples for VOC analysis	Full TCL/TAL CLP SOW
Field Blanks	5 (estimated)	NA	One per type of equipment per decontamination event	Full TCL/TAL CLP SOW

SOIL SAMPLING

The collection of 21 soil samples is proposed. Three soil samples will be targeted for collection as subsurface soil samples from those monitoring well borings located on the former dump site, as

Table 2
Analytical Parameters

Sample Matrix	#/Type Bottles	Laboratory Analysis	Preservation	Holding Times *VTSR (c)
Surface Soil	Two (2) 40–ml glass vails w/Teflon septium caps	TCL Volatile Organics (a) CLP Organic, SOW OLM01.8 (8/91)	Cool to 4 degrees C	10 days to analysis
	One (1) 8–oz. glass jar	TCL Extractables (a) CLP Organic, SOW OLM01.8 (8/91)	Cool to 4 degrees C	10 days to extraction; 40 days to analysis
	One (1) 8–oz. glass jar	TAL Inorganics CLP Inorganic, SOW ILM03.0 (2/93)	Cool to 4 degrees C	Hg–26 days; others 6 months to analysis
Ground Water	Two (2) 40–ml glass vails w/Teflon septium caps	TCL Volatile Organics (a) CLP Organic, SOW OLM01.8 (8/91)	HCL to pH less than 2, Cool to 4 degrees C	10 days to analysis
	Four (4) 1L amber glass jars w/ Teflon lined caps	TCL Extractables (a) CLP Organic, SOW OLM01.8 (8/91)	Cool to 4 degrees C	5 days to extraction; 40 days to analysis
	One (1) 1L polyethylene bottle	TAL Inorganics CLP Inorganic, SOW ILM03.0 (2/93)	HNO3 to pH less than 2, Cool to 4 degrees C	Hg–26 days; others 6 months to analysis
QA/QC Samples (b)	Two (2) 40–ml glass vails w/Teflon septium caps	TCL Volatile Organics (a) CLP Organic, SOW OLM01.8 (8/91)	HCL to pH less than 2, Cool to 4 degrees C	10 days to analysis
	Four (4) 1L amber glass jars w/ Teflon lined caps	TCL Extractables (a) CLP Organic, SOW OLM01.8 (8/91)	Cool to 4 degrees C	5 days to extraction; 40 days to analysis
	One (1) 1L polyethylene bottle	TAL Inorganics CLP Inorganic, SOW ILM03.0 (2/93)	HNO3 to pH less than 2, Cool to 4 degrees C	Hg–26 days; others 6 months to analysis

Notes:

(a) Triple volume will be obtained for MS/MSD.

(b) QA/QC samples: Field and DI water blanks to be analyzed for all parameters; trip blanks to be analyzed for volatile organics only; MS/MSD to be analyzed for volatile and extractables organics only.

(c) Holding Times from Validated Time of Sample Receipt.

discussed below. The other 18 soil samples will be collected as surface soil samples. The approximate location for these surface soil samples are as follows:

1) Ten samples will be collected from the school property. The samples will be spread out to provide as broad a coverage as possible. However, each sample location will be biased towards any indication of contamination observed at the sampling location. As an example, during the site visit conducted by Ebasco on January 17, 1995, a physical education teacher and custodian working on ground maintenance were questioned. Both individuals reported that debris was coming up on the playing fields, while the grounds maintenance man reported that much of the material worked up was disposed of in a pile located towards the east side of the school property. The ground below the debris pile will be sampled to show those COCs that may be leaching off the debris and those COCs that may be broadly present on the playing fields.

2) Six samples will be collected from the Endicott Plaza shopping area. Two samples will be collected from parking lot areas identified as particularly broken up were the underlying soil may be exposed. Two samples will be collected just past the southern edge of the parking lot area were the ground surface is unpaved. These samples would be near the existing shallow soil sample, NY81-S3, which was collected near the McDonald's fast food restaurant and where debris was noted in the hand augered hole at a depth of less than 2.5 feet. The final two samples will be collected from northern side of the shopping plaza behind the main plaza building. The pavement in this area is very poor condition and borders additional residential homes.

3) Two samples will be collected as background samples. The locations of these samples will be determined following the review of additional records in the area. Establishing background soil conditions, particularly for inorganic COCs, is a recognizably difficult task. For this reason the location of these two samples will be deferred until additional area data is reviewed.

GROUNDWATER SAMPLING

Five groundwater monitoring wells are proposed for installation and sampling at the Old Village of Endicott Dump. In addition, it is proposed that one of the previous two sampling locations, NY81-GW1 be resampled. NY81-GW1 represents a downgradient public drinking water supply well and as such is appropriate for resampling. The other previous ground water sampling location, NY81-GW2, represents a private, approximately upgradient well of questionable construction. As a new, upgradient monitoring well will be installed during this sampling visit, NY81-GW2 does not need to be resampled. The locations of the proposed monitoring wells are described below and are also shown on Figure 1. Approximate locations are as follows:

1) Two monitoring wells will be located on the downgradient side of the former dump site. One will be located on south side of the Village of Endicott school property midway between Vestal Street and Loder Avenue. The other well will be located on the south side

of the Endicott Plaza slightly closer than midway towards Vestal Street rather than midway between Vestal Street and Harrison Avenue.

2) One well will be located off site on the upgradient side of the former dump area. This is towards the north side of the dump area on the topographically upgradient side. The exact location will be determine follow a review of available public property and accessibility of potential locations to both a drill rig and sampling crews.

3) One well will be located off site on the downgradient side of the former dump area. This well will be located approximately 500 feet south of the dump, midway between the estimated edge of the former dump and the municipal water supply wells. As above, the exact location will be determined following a review of available public property and accessibility of potential locations to both a drill rig and sampling crews. This well may be replaced by an existing monitoring well previously installed as part of an underground storage tank (UST) removal. The exact location and continued existence of the monitoring well is unknown at present however, the background files indicate that the well is located downgradient of the dump and contains high naphthalene concentrations. Naphthalene is commonly used in tannery processes and if this monitoring well is still available for sampling it will be used in place of the monitoring well proposed in bullet number 3. If the monitoring well is no longer available, the proposed monitoring well will be placed as close as possible to the same location.

4) The fifth monitoring well will be a nested, deep well, adjacent to the monitoring well located on school property. This monitoring well is discussed in greater detail below.

Four of the monitoring wells will be constructed as shallow, water table monitoring wells. Total depth is anticipated to be less than 30 feet, with probable depth to water on the order of 10 to 20 feet below ground surface. Screen intervals will be ten feet. The screens will be set at a depth to bridge the water table, extending two to four feet above the water table and six to eight feet below.

The deep, nested well will be targeted to extend into the top of the lower aquifer or, to the base of the upper aquifer if it is present beneath the fill at the drilling location. Initially, a pilot boring for the deep monitoring well will be drilled down to bedrock. Based on the geologic and hydrologic data obtained in the pilot boring the screening interval of the deep well will be determined based on the strategy presented below:

1) If the monitoring well boring penetrates through the bottom of waste material and does not encounter any clay in excess of three feet thick below the waste, the screen interval will be set between 40 and 50 feet below ground surface.

2) If the monitoring well boring penetrates through the bottom of waste material and encounters clay in excess of three feet thick below the waste, the screen interval will be set from the top of the clay upward in the upper aquifer, provided the base of the screen is at least 40 to 50 feet below ground surface.

3) If a clay layer greater than three feet is encountered in the monitoring well boring at a depth less than 40 feet below ground surface and beneath the waste, the monitoring well will be set below the clay layer in the lower aquifer. It will be screened ten feet down from the top of the lower aquifer.

4) As the proposed location of the deep monitoring well is along the southern boundary of the former dump, the potential exists that no waste fill may be penetrated. In this case, the same criteria as noted in 1, 2 and 3 will be followed using the presence or absence of clay as a criteria for placement of the screen interval.

All five monitoring wells will have a screen length of ten feet. At present, the depth of the lower aquifer beneath the former dump is unknown. Reference was made in the background files that the dump extended as deep as 40 feet and also that the school extension, geotechnical borings encountered clay at 30 feet below ground surface. For this reason, it is anticipated that the deep monitoring well will extend to a depth of 40 to 50 feet at a minimum. The pilot boring is anticipated to encounter bedrock at a depth of approximately 100 feet, based on references contained in the background files on wells in the area.

The five proposed monitoring wells will provide broad coverage over the area of the anticipated ground water plume and provide critical information required for the RI efforts including; geologic, hydrogeologic, and aqueous geochemistry beneath the dump site.

The deep well in particular will yield valuable data on the potential upward or downward hydraulic gradient that exists between the upper and lower aquifers, or within the upper aquifer itself. As noted above, the former dump site is postulated as being a glacial kettle hole with the resultant depression serving as a conduit between the upper and lower aquifers. As a result, waste deposited in the dump and any contaminants of concern migrating from the waste may be in direct contact with both aquifers.

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Field, and deionized water blanks will be obtained as per the frequency specified in the Final Draft Generic Field Sampling and Analysis Plan (2/93) . Duplicate samples will be obtained at a frequency of 1 in 20 samples per matrix. Refer to Table 1 for the total number of QA/QC samples obtained during the sampling visit. All QA/QC samples will be analyzed via the Contract Laboratory Program for the parameters specified in Table 2.

Decontamination

Decontamination will be conducted in accordance with the Final Draft Generic Field Sampling and Analysis Plan (2/93).

Documentation

Documentation (i.e., chain of custody, photos, logbooks, etc.) will be completed in accordance with the Final Draft Generic Field Sampling and Analysis Plan (2/93).

Photographs will be taken to document site conditions. Field observations will be recorded in the logbook, including descriptions of the sampling locations, borehole logging, and any deviations from the Task Work Plan. Chain of Custody will be maintained until samples are relinquished to a courier or to a lab assigned to perform the analysis.